REMARKS/ARGUMENTS

Favorable consideration of this application, as currently amended and in light of the following discussion, is respectfully requested.

Claims 1-3, 5, 6 and 8-12 are presently pending in this application, Claim 4 having been canceled, and Claims 1 and 9 having been amended by the present amendment.

In the outstanding Office Action, Claims 1-6 and 8-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Takeuchi (U.S. Patent 3,991,254) in view of Iseli et al. (U.S. Patent 4,503,128) and Clough et al. (U.S. Patent 5,326,633), and further in view of Lange et el. (U.S. Patent 4,166,147) and Pitcher (U.S. Patent 4,417,908) and/or Abthoff et al. (U.S. Patent 4,667,469); Claims 1-6, 8, 9, 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. (U.S. Patent 5,340,548) in view of Clough et al. and Lange et el.; and Claims 1 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. in view of Clough et al. and Lange et el. as evidenced by JP 06-239656 (hereinafter "JP '656").

Claims 1 and 9 have been amended herein. These amendments are believed to find support in the specification, claims and/or drawings as originally filed, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually agreeable claim language.

Before addressing the rejections based on the cited references, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 is directed to a filter for the purification of an exhaust gas, and it recites: "a porous ceramic carrier having a partition wall portion and a plurality of through-holes, the through-holes extending in a longitudinal direction of the porous ceramic carrier, the partition wall portion partitioning the through-holes and being configured to filter particulates in an exhaust gas; and a catalyst coat layer

provided in the partition wall portion of the porous ceramic carrier and comprising at least one oxide ceramic and a catalyst active component, the catalyst coat layer further comprising a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment, wherein the porous ceramic carrier has a porosity of 40-80% and a thermal conductivity of a filter body comprising the porous ceramic carrier and the catalyst coat layer is set to be 0.3-60 W/mk."

The Office Action states that "Takeuchi does not disclose ... wherein the porous ceramic carrier has a porosity of 40% - 80 % and a thermal conductivity of a porous ceramic carrier and the catalyst coat layer is 0.3-60W/mk" but "Takeuchi discloses wherein the insulating structure further comprises a heat insulating ceramic layer (c) surrounding the porous ceramic catalyst (520), wherein the heat insulating ceramic layer is porous and has a thermal conductivity in the range of 0.3 - 0.6 kcal/mH°C (see Takeuchi, column 5, lines 40-45)."

However, it is respectfully submitted that Takeuchi does not teach or suggest "a porous ceramic carrier having a partition wall portion ... partitioning the through-holes and being configured to filter particulates in an exhaust gas; and a catalyst coat layer provided in the partition wall portion of the porous ceramic carrier and comprising at least one oxide ceramic and a catalyst active component, the catalyst coat layer further comprising a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment, wherein the porous ceramic carrier has a porosity of 40-80% and a thermal conductivity of a filter body comprising the porous ceramic carrier and the catalyst coat layer is set to be 0.3-60 W/mk" as recited in amended Claim 1.

More specifically, Takeuchi describes an insulating layer (c) disposed in the space between the inner wall and outer wall of a double structure such as one formed by an outer container encasing a catalyst device. According to Takeuchi, "a light-weight insulating

structure having a vibration resisting property in which spaces in various insulating structures are filled uniformly with a slurry having a high fluidity, and the slurry is heated to expand and solidify the same so that strong insulating layers firmly fused to said insulating structures are formed ...."[1] Thus, the insulating layer (c) in Takeuchi clearly is not provided or coated with a catalyst layer and certainly does not receive an exhaust gas as in the through-holes extending in the longitudinal direction of a porous ceramic carrier. Nor does the insulating layer (c) partition the through-holes and filter particulates in the exhaust gas permeating from the through holes.

As such, Takeuchi fails to disclose or suggest a catalyst coat layer provided in such a partition wall portion. It is therefore respectfully submitted that Takeuchi fails to teach or suggest "a catalyst coat layer provided in the partition wall portion [*i.e.*, "a partition wall portion ... partitioning the through-holes and being configured to filter particulates in an exhaust gas"] of the porous ceramic carrier and comprising at least one oxide ceramic and a catalyst active component, the catalyst coat layer further comprising a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment, wherein the porous ceramic carrier has a porosity of 40-80% and a thermal conductivity of a filter body comprising the porous ceramic carrier and the catalyst coat layer is set to be 0.3-60 W/mk" as recited in Claim 1.

The Office Action also states that "Abe does not explicitly disclose wherein the filter body comprising the porous ceramic carrier has a thermal conductivity in the range of 0.3-60 W/mK; or wherein the catalyst coat layer comprises a second substance having a refractive index larger than that of the oxide ceramic" but "Clough discloses the coating of monolithic catalyst substrates ...[,] explains that the porosity of such substrates, typically in the range of 10% to 65% ... can be controlled ...[, and] notes that the thermal conductivity of the

[1] Takeuchi, column 1, lines 58-64.

monolithic substrate can be reduced in magnitude by up to 90% compared to non-porous supports by optimizing the degree of porosity ...."

However, it is respectfully submitted that neither Abe et al. nor Clough et al. teaches or suggests "a porous ceramic carrier having a partition wall portion ... partitioning the through-holes and being configured to filter particulates in an exhaust gas; and a catalyst coat layer provided in the partition wall portion of the porous ceramic carrier and comprising at least one oxide ceramic and a catalyst active component, the catalyst coat layer further comprising a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment, wherein the porous ceramic carrier has a porosity of 40-80% and a thermal conductivity of a filter body comprising the porous ceramic carrier and the catalyst coat layer is set to be 0.3-60 W/mk" as recited in amended Claim 1.

That is, Abe et al. describes that a porous ceramic carrier layer formed on a porous filter and a catalyst supported by the ceramic carrier layer, and it simply states that the ceramic carrier layer may be made of any porous ceramic material having a large surface areas such as titania, alumina, silica, titania-alumina or titania-silica.[2] And nowhere is Abe et al. believed to disclose or suggest that a catalyst layer contain "a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment" in addition to one or more oxide ceramic and a catalyst active component. Nor does Abe et al. disclose a porous ceramic carrier having a porosity of 40-80% and a thermal conductivity of a filter structure body constructed of such a porous ceramic carrier and a catalyst coat layer set to be 0.3-60 W/mk. Furthermore, Clough et al. merely describes coating a substrate such as SiC and cordierite with tin oxide. Also, according to Clough et al., "[t]he amount of porosity ... generally is from about 30% to about 65%, preferably from about 30% to about 55%."[3]

[2] See, for example, Abe et al., column 4, lines 9-17.
[3] Clough et al., column 21, lines 48-51.

Therefore, it is believed that the structure recited in Claim 1 is clearly distinguishable from both Abe et al. and Clough et al.

As discussed in the previous response, Iseli et al. being directed to a thermally sprayable ceramic, Iseli et al. simply describes a method in which a cordierite is thermally spayed by flame or plasma onto certain components to withstand mechanical, thermal and abrasive conditions. Moreover, according to Iseli et al., the coating provides a porosity of only up to 40 volume %, which is believed to be still too low for a filter. Finally, Lange et al. merely describes a shaped and fired TiO_2 article, JP '656 describes inorganic fine particles such as rutile TiO_2 for a composition of an insulation material, and Pitcher and Abthoff et al. are cited for the plugs on the opposing ends of a porous honeycomb structure. These references thus are not believed to teach or suggest "a porous ceramic carrier having a partition wall portion ... partitioning the through-holes and being configured to filter particulates in an exhaust gas; and a catalyst coat layer provided in the partition wall portion of the porous ceramic carrier and comprising at least one oxide ceramic and a catalyst active component, the catalyst coat layer further comprising a substance having a refractive index larger than a refractive index of the oxide ceramic, or a colored pigment, wherein the porous ceramic carrier has a porosity of 40-80% and a thermal conductivity of a filter body comprising the porous ceramic carrier and the catalyst coat layer is set to be 0.3-60 W/mk" as recited in amended Claim 1. Therefore, it is respectfully submitted that the subject matter recited in amended Claim 1 is also distinguishable over Iseli et al., Lange et el., Pitcher, Abthoff et al. and JP '656.

Because the cited references discussed above fail to disclose the catalyst layer as recited in amended Claim 1, their teachings even combined are not believed to render the filter recited in Claim 1 obvious.

Since Claims 2, 3, 5, 6 and 8-12 depend directly or indirectly from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2, 3, 5, 6 and 8-12 are believed to be allowable as well.

In view of the amendment and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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